

SL-II MC-497/1
Time: 06:34 CDT
6/4/73

PAO This is Skylab Control; 11:34 Greenwich mean time. Less than 1 minute now from acquisition at Carnarvon - as you were, Honeysuckle Creek tracking station in Australia. Should be getting the first communication with the crew of Skylab during this pass, some half hour into the - past the normal 6 a.m. Houston time wake period for the - or wake time for the crew. Again faced with a rather busy day of gathering scientific data. Earth resources survey track- or pass number 4, along track number 19, four runs with the solar astronomy experiments in the Apollo telescope mount, and later in the day, the commander, Pete Conrad, and pilot, Paul Weitz, will be alternating the two medical experiments, M092, inflight and lower body negative pressure experiment.

CC Honeysuckle; and got you for 2 minutes.
Standing by.

SC Good morning. We're all up and operating.
Nice to hear you back well and rested, Richard.

CC Yes, sir. Glad to be back.

PAO And M093, vectorcardiogram. We have live air-ground from Honeysuckle, standing by for resumption of communications.

CC Skylab, Houston. We're about 1 minute from LOS. We're going to see you at Goldstone at 12:03. We're going to be dumping the airlock module data recorder at Goldstone. Also, the last two messages we have for you, which are the S192 alignment procedures for Paul, are going to be uplinked there. And the third thing is, we're going to be commanding a program pitch at Goldstone, which will update the rate gyro Y3 scale factor, and this data is based on what we received when you did the Y-axis maneuver for us the other day. So we'll see you at Goldstone.

SC Okay.

PAO This is Skylab Control, 11:39 Greenwich mean time. Loss of signal from Honeysuckle Creek, Australia, as the Skylab space station crosses the islands of New Zealand. And in 24 minutes, we'll begin the first stateside pass since the crew has awakened. The activities today in the Flight Plan hinge primarily around EREP, Earth resources survey number 4, and four runs with the solar astronomy experiments. Discussion of today's Flight Plan likely will resume over the States. However, the crew will be involved in getting breakfast and squaring away the space station in the post-sleep activities period that's allocated at this time. And at 11:41 Greenwich mean time, this is Skylab Control. Back in 22 minutes.

END OF TAPE

SL-II MC498/1
Time: 07:02 CDT
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PAO This 's Skylab Control at 12:02 Greenwich mean time. About 50 seconds away from acquisition at Goldstone for stateside pass. Not much conversation expected during this particular stateside pass, but we'll leave the circuit up live to catch any words that do pass between spacecraft communicator, Dick Truly, and the crew of Skylab. Standing by at 12:03 Greenwich mean time, Skylab Control.

CC Hello again, Skylab; Houston. We're stateside now for 11 minutes.

SC (garble) Houston.

CC And about the only thing I got for you guys this pass is we are going to be starting a few commands to power down some electrical power things so that one - now that you guys are awakened can take care of.

CC Skylab, Houston. Be advised we're commanding the (garble) into solar inertial mode, and we're going to close the fine sun sensor door.

SC Roger.

SC Permission granted, Mr. Truly.

SC Thank you, sir.

CC Skylab, Houston. I advised very shortly we're going to be commanding the PRIMARY COOLANT LOOP, OFF, and you'll get a caution and warning.

SC Roger. (garble)

CC Roger.

CC Skylab, Houston. We're going to drop out here in about 30 seconds. Have about a 2-minute break until (garble).

END OF TAPE

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CC Skylab, Houston. We're - got you at Bermuda for about the next 5 minutes. And we are going to have a keyhole in this pass, lasting about 1 minute. It's going to be about 2 minutes from now.

SC How can you say Bermuda? I can look out and see it's the Great Lakes.

CC By gosh, you're looking backwards, cause you just passed it.

SC Well, it's the last thing I can see besides the clouds.

CC Roger that.
SC You're right. In the morning, that window does look backwards. We get a heck of a good look at where we've been.

CC Roger.
SC (Garble) Houston, CDR.

CC Go ahead, CDR.
SC Will you ask FAO how much money the SPT, and the PLT paid them to give the CDR the cleaning duty today, rather than JOP 12?

CC (Laughter) Stand by, I'll ask him. He's right here.

SC You there, Houston?

CC Affirm, PLT, go ahead.

SC Sometime today, Dick, could you find out for us, how we make sure when we get to the end of the roll of film on the Hasselblad, because, I don't know if you remember, but Fred the - (laughter) the frame counter stopped reading early in the game and we've been trying to keep track just by keeping good logs. We're not too sure of that. So what are the indications when it comes to the end of the film, please?

CC Roger. We'll get you an answer.

CC Skylab, Houston. We're about 30 seconds from LOS. We're going to see you at Canary at 26 and the next time you guys are up in the airlock module, on panel 201, we'd like to make sure the amp air - hour intergrate for the - the amp-hour integrator for PCC8 circuit breaker is closed, panel 201.

SC Okay. It's a bad morning, isn't it?
CC Roger.

END OF TAPE

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CC Skylab, Houston. We're AOS at Canary for
the next 7 minutes.

SC Okay.

SC Hey, Dick.

CC Go ahead.

SC That amp-hour integrator circuit breaker
is closed. Why did you ask if it was open?

CC Stand by!

SC Well, I assume that maybe your valves
went to zero on that, but ours are reading good up here. All the
amp-hour meters except number 8, which I reset for you, but it looks
good on board.

CC Roger. Number 8 was the only one that
we saw reset to zero, and we just wanted you to check it for us.

SC I thought you wanted me to check number 7.

CC Negative. Maybe I said it wrong. It was
8 we wanted.

SC Yeah. Well, it's closed now. You remember
I reported that the first day or so that I inadvertently opened
that circuit breaker.

CC Roger. Understand. It's in the configura-
tion we wanted now, Paul.

SC Okay. Looks like you guys got a pretty good
charge on number 7 yesterday.

CC Yes, sir; 100 percent.

SC I saw that. You want to believe the
secondary instead of the primary.

CC That's affirmative. That's what we did.

SC Houston, SPT. I've got a couple of
medical questions for you.

CC Go ahead.

SC Okay. Number 1; you sent me a pad for
a M133 temp check tonight. Now I have two questions about that.
One; in general, I'd like to be reminded how many total repeti-
tions of M133 are in this flight. The spacing is a little bit
heavier here than I thought it was going to be. Number 2; the
temp check looks as if it's the same thing I did the first night
out. Here's a temp from the sleep compartment, report on its
condition and find out that it didn't hack it. I wonder if you're
really interested in doing it over again, and this losing another
its day of data.

CC Roger, Joe. Stand by.

SC Okay. And while you're working on that
one, we also received a message to reduce the top workloads in
our M171. And I realize that I made a speech several days ago
about the heat and the inefficiency up here. The temperature has since
dropped to essentially normal. And we've acclimatized to it perfectly.
We're (garble) learning how to ride the bike, although we haven't
seen giving you the M171 corrected numbers. Nothing's come back
up to us yet from the ground. And I'd like to see it. Our new data

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on board indicates that the decreases might be too much, especially in the case of the SPT and the CDR. The PLT is probably okay because the higher the workload, the greater the zero g factor becomes. But we'd like to counter recommend to our M171 PI friends, that Pete go to 140 instead of 125. And that I go to 170 instead of 155. We can finish the protocol there, and I think they'll get more data if we're a little above our 75 percent work rate than if we're definitely below it. Over.

CC Roger, Joe. Understand. Why don't you let us consider that one and we'll get back to you.

SC Okay.

CC Skylab, Houston. We're about 20 seconds from LOS near Canary. We're going to see you at Honeysuckle at 13:11.

PAO This is Skylab Control. Space station Skylab has gone over the hill from Canary Island and Madrid Tracking Station. Next station in 35 minutes will be Honeysuckle Creek, Australia. The calculated average ambient temperature in the Skylab space station, this morning is 76.5 degrees Fahrenheit getting more comfortable every day. The electrical power situation remains unchanged with charger battery and regulator modules numbers 3 and 15 still off line. Current state of charge, average battery state of charge is 71.2 percent, on the 16 batteries functioning properly. Back in 34 minutes for the Honeysuckle pass. 12:37 Greenwich mean time this is Skylab Control.

END OF TAPE

SL-II NC-301/3
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category, the so-called targets of opportunity are for gathering data for local and other government agencies for river, coastal erosion, seepage around dams, for example, marine ecology; how it's affected by coastal interface; land use and the local water table in several locations across the country: Powder River Basin in Wyoming and Montana, the Mississippi River, northeast Alabama, Puerto Rico, the Virgin Islands, the Platte River, Omaha, Nebraska, Sioux Falls, South Dakota, and Lincoln, Nebraska. In the geological category, associated with this, will be scanned and photographed soil erosion and volcanic activity, faults, information gathered for potential mineral exploration in highway engineering in Wyoming, in general, and then specifically in the Big Horn Mountains of Wyoming and Montana. The sea surface state in the North Atlantic toward the end of the pass will be surveyed by the EREP instrumentation. Then the Skylab altimeter will be calibrated with part of the run after the Atlantic shoreline is crossed. In the 500 series of task sites, which are mainly related to meteorology, cloud heights and various types of clouds will be photographed and an attempt made to relate these cloud heights to specific weather systems over the continental United States. The 600 series of task sites for today are aimed toward gathering data on coastal geology, specifically the location of gravel deposits, survey of marine life distributions, and evaluating the Earth resources survey instrumentation for oceanic survey work, such as water depths, survey of coastal wetlands and marshes for the ecological impact significance. The specific sites are Puerto Rico and Virgin Islands offshore platforms or shelves, and the coastline of South Carolina and Georgia. Moving on into the 700 series of tasks - those are primarily hardware development and evaluation of the performance of remote sensing techniques and instrumentation. Specific sites are the Puerto Rican trench, Black Hills of South Dakota, and the Omaha, Nebraska region. And the 800 series, which looks at the ecological affects of strip mining and evaluates remote sensing as a technique for measuring changes in urban populations since the most recent United States census in 1970. And the specific sites for this series are Holt County, Nebraska; the so-called Indiana test site, where the strip mining is involved; San Juan, Puerto Rico; and Atlanta, Georgia. We're 3 minutes away from Hawaii acquisition; so why don't we just stay up for acquisition from that site. And since the gap between Hawaii and Goldstone is rather brief, we'll just stay up all the way across the States on this particular orbit, which is number 301. At 13:28, standing by for Hawaii and stateside; this Skylab Control.

END OF TAPE

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PAO This is Skylab Control; 13:10 Greenwich mean time. About 30 seconds now from acquisition at Honeysuckle. Standing by for the Honeysuckle pass, which is about 9-1/2 minutes long; Skylab Control.

CC Skylab, Houston. We're AOS at Honeysuckle for the next 9 minutes.

SC Roger, Houston.

SC Hey, Dick. Ask the EREP guys if I have to turn the EREP COOLER to FLOW for this 192 checkout. Will you, please?

CC Affirmative. I will.

CC And, Skylab, while we're getting that answer, I've got a couple of answers on a couple of questions for - that Joe asked. First of all, on the M133 scheduling for this mission, we've already accomplished four runs of it. We've got nine more to go, for a total of thirteen. And originally prior to flying this flight, we had scheduled fifteen; so after this run that's coming up this evening, I think, we will start going to alternate days. And the total for the mission will be 13. Also, on the question of the sleep cap, what we're just trying to ascertain is whether or not those sleep caps that were launched down in S913 - or that sleep compartment locker are any good or not because if they are not, we probably are going to have to fly up another package on the command module. And the - about the only difference in this particular procedure is that we would like to go through the caps and get a very good check on them before using them, and so we will not lose the night's data. Out.

SC Okay, Houston. What happened the first night was that I extracted the cap from 913 and it's appearance wasn't right. The electrode sponges were soft, and as if they had some gas in them. By putting the cap on, the sponges were a little drier than normal, but I did get a good checkout. I got six green lights. And by morning the six green lights had disappeared enough to apparently destroy much of that night's data. And it's just that - I was just questioning whether the PI wants to run that risk again because that's probably what'll happen. I have an alternate suggestion, which is that I try and doctor the sponges before I put them on by inserting KY jelly or Vaseline or something from the IMSS and - to try and make them last.

CC Roger, Joe. No, we don't particularly want you to have to use jelly or doctor them up. We'd prefer to go ahead and use the Skylab III caps before having to do that.

SC Okay. There is a definite difference in appearance and moisture content between the two groups of caps. And we already know that.

CC Roger. I understand.

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SC Okay, and I'll go it one more night and see what happens.

CC Okay. Thank you, sir. And in answer to the PLT's question: affirmative. We would like to go to FLOW on EREP COOLER in order to do that S192 alignment check.

SC Okay.

SC Oh no, for their information, Dick - For their information, the four large thumbscrews I did check during verification; they were all tight. The four small thumbscrews that hold the heat exchanger plate on, I could get - you know, just a little bit of a turn - less than an eighth of a turn. They were not really tight like the big ones were though.

CC I understand.

SC (Garble) EREP (garble) is everything I expected it to be as far as difficulty in moving it.

SC And the comment does not require a reply, Houston.

CC Roger.

CC And, Skylab; Houston. One more comment about the EREP today. During the EREP prep, we'd appreciate it if you'd check the - measure the tape remaining on tape recorder number 2. And assuming that you have - you have at least 1-1/8 inch tape remaining, tape recorder 2 is GO for EREP data take today. In the event you have less than 1-1/8 inches remaining, switch over to tape recorder number 1, and it's already loaded, and use that for the data take.

SC Okay, we'll take a look right now.

CC Okay.

SC It's going to be close. I'm not sure, but I think we may have enough.

SC Yeah, I'm going to get a tape to get the measure.

CC Okay. We think you should, too, Pete. But we just want to make sure.

SC And the S183 is off and running on time.

CC Roger.

SC Houston, how would you go for an inch and a quarter?

CC Roger. We're at GO with that. Thank you much. And, Skylab; Houston. We're about 45 seconds from LOS. We're going to see you at Hawaii at 13:31, and be advised we are going to dump the data tape recorder at Hawaii.

PAO This is Skylab Control; 13:21 Greenwich mean time. Next station - Hawaii in 9 minutes. Later on in the morning, the Skylab crew will conduct Earth resources experiment package survey run number 4 for this mission, along groundtrack 19. And a fairly extensive list of task and sites, specific discipline task and locations have been lined out for the Skylab crew this morning. In the first

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CC Skylab, Houston; AOS for 9 minutes.
CC SPT, Houston.
SC Go ahead.
CC We have a one time message here on the caution and warning. We're going to turn down the canister fluid loop for power conservation. Prior to this we want you on panel 207 to PUMP DELTA-P, OFF. COOLANT TEMPERATURE, OFF. HEATER TEMPERATURE, OFF.
SC On 207 you want to inhibit DELTA-P, COOLANT TEMP and HEATER TEMP. Is that right?
CC That's it; on caution and warning AM 207 panel.
SC Roger, Houston. And will this affect ATM operations at all this morning?
CC Negative.
SC How long are you going to leave the loop down?
CC It'll be down approximately 2 hours.
SPT, your message was delivered and appreciated and acknowledged.
SC Okay. Houston how much time you got?
CC About 7 minutes.
SC Okay. I just want to make clear that I'm in a process of doing the - for the EREP guys - in the process of doing their 192 alignment. This is the third time we have done all these procedures, and I just want us to be sure that they realize that messing with that stinking visible focus ring may cause us to lose the whole ball of wax. We'll go ahead and we'll try it as described here. I got another question. Sometime today we'd like maybe a little discussion on the nadir aligned. Pete and I have noticed that we haven't done a nadir align yet, and we just wondering what's the rationale behind not trying another one.
CC We copy that.
CC Paul, this was really chewed over yesterday on the ground and it was felt that this alignment was absolutely necessary on both thermal and visible.
SC Well, I assumed that it was. I'm not complaining about doing it, I'm just saying that there's nothing different in this procedure that we haven't tried already. But we'll - we'll hear it whack.
CC We copied that last one, Paul.
CC PLT, reference your question on the Hasselblad film drive; the motor drive simply stops. In other words, you can't get any advance. When you reach the end of the film, the signal may be either red or white.
SC Okay. Thank you, Bill.

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CC And, Paul, they were curious as to whether
you were having any difficulty with the counter on the
Hasselblad.

SC Yeah, it stoped counting at about 22,
which we reported at the time.

CC We copy.

PAO This is Skylab Control. We're still
estimating the change-of-shift press conference at approximately
8:45 in the Houston News Center. We'll take down the air-
ground circuit during that period and accumulate recorded
conversation for delayed playback. LOS Hawaii in 3 minutes.
Skylab Control standing by.

END OF TAPE

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CC	Skylab, we're going LOS. We'll have
you at Goldstone at 13:42.	
CC	AOS, Goldstone 8 minutes.
SC	Roger.

END OF TAPE

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CC Skylab, Houston; AOS - LOS in approximately 30 seconds. Bermuda 13:54.

PAO This is Skylab Control. Estimating start of the change of shift press conference with Flight Director, Chuck Lewis, in approximately 5 minutes. He has just left the Control Center and is in route to the news room. 13:52, standing by. Still have about 8 minutes or 9 minutes remaining in this stateside pass as soon as Bermuda acquires. We'll close down the line after Bermuda LOS and tape the Madrid Canary conversations for delayed playback after the press conference. 13:53, Skylab Control.

CC Skylab, Houston. AOS 8 minutes.

SC The numbers for the EREP guys are about ready to copy.

CC We're standing by, Paul. Go.

SC Okay. The meter readings after the 30-minute warm up: Bravo 3 was 83, Charlie 3 was 88, Delta 3 was 85, Charlie 5, according to our dope, is in the middle of out of tolerance at 40, Delta 5 is 13, Delta 6 is 40.

CC Copy.

SC Okay. Now another thing. I came back turned the align switch on. The align ready light does not come on. I went back to the panel, opened the door, gotta ready light closed the door, got the door closed, came back here and the align ready light was on.

CC Copy.

PAO This is Skylab Control. The change of shift press conference with Flight Director, Chuck Lewis, will begin momentarily in the Houston News Room. We'll take down the air-ground circuit at this time, and tape for delayed playback, the Canary Island and Ascension passes of the Skylab space station. At 14:01 Greenwich mean time, this is Skylab Control, out.

END OF TAPE

SL-II MC-305/1
Time: 09:26 CDT
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PAO This is Skylab Control; 14:27 Greenwich mean time. During the change-of-shift press conference, we had the Skylab pass over the Canary Island and Ascension Island tracking stations. And have accumulated slightly over 3 minutes of air-to-ground tape recording, which we will play back at this time. And then come up again in 18 minutes from now for the Carnarvon and Honeysuckle tracking stations. Roll tape.

CC Skylab, LOS in 1 minute; Canary, 14:03.

CC Skylab, Houston. AOS 16 minutes.

SC Well, I found it, Houston. I got to hand it to you. What's - I'm still working on it - What were the preflight values of thermal alignments, please?

CC Stand by.

SC Just sing them out. I'll be back down on it and I won't answer you.

CC Copy.

CC PLT, Houston. The preflight thermal was 65; 65 percent.

SC Okay. The best I can get out of this is 45. Now we got the same problem with the focus. Let me read some knob settings to you. I'll be back in half a minute.

CC Copy.

SC Okay, Houston. The settings are X 0.530; Z 0.510. And the focus is back all the way out, until it begins to stop. The meter indications, when I adjust X and Z, indicate a good focus. And as soon as I move it very far at all, and I'm talking about 0.002, for instance, the value does start to drop. Now I got the same problem in focusing it. As soon as I turn the focus ring back in toward the detector, I almost lost it a couple of times there, and it's just a flat deflection. I can get a higher reading on it by pushing down; that is, into the case on that focus ring, but it just won't stay.

CC We copy that, Paul.

SC Okay, I'm going to press on then and try the visible alignment again, as prescribed here.

CC Copy.

SC Can I get a couple of words? I just happened to notice that twitch when I caught it, because you can see where the focus is now. It was quite a bit out of focus with that ring only backed on backed out three-quarters of a turn. And we could very well - easily - what we obviously did was miss it before in our searches.

CC Copy.

CC Skylab, LOS 1 minute; Carnarvon 14:46.

PAO This is Skylab Control. That concludes playback of the Canary Island, Ascension Island tracking pass on revolution 302. It'll be up again in 15 minutes for Carnarvon and Honeysuckle Creek, Australia, tracking stations. Currently, the Skylab space station is in an orbit measuring

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231.6 nautical miles at perigee by 241 nautical miles at apogee.
Period of orbit - 1 hour 33 minutes 11 seconds. At 14:31
Greenwich mean time; returning in 14 minutes, Skylab Control.

END OF TAPE

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CC Skylab, Houston. AOS for 9 minutes.

CC Skylab, Houston. The power load has been less than expected this morning, and because of that, we have not powered down the coolant loop and do not presently plan to do that. This status changes, we will notify you.

PAO This is Skylab Control; presently the ATM batteries are showing average state of charge and 87.5 percent total capacity. And as mentioned by Cap Com, Bill Thornton, the coolant loop is being left on because of - sort of surplus of power, if one can call it surplus in this mission. 14:51, standing by for the remainder of the Honeysuckle pass, Skylab Control.

CC Skylab, we're going LOS in about 30 seconds. We will see you at Hawaii at 15:09. Also, we will be dumping the tape recorder at that time.

SC Okay, Houston.

SC Okay, Houston; be advised in the process of attempting to tweak up the visible alignment of S192, which there is no way you can do without putting loads on that whole assembly, I've lost the thermal alignment. I've gone back and starting this procedure over again to see if I can find it.

CC We copy that.

PAO This is Skylab Control. We apparently have had loss of signal from the Honeysuckle Creek, Australia, tracking station. 12 minutes now to Hawaii. Pilot, Paul Weitz, commenting that he was having some difficulty doing the S192 alignment in preparations for the EREP pass later on today. That he was going to attempt another alignment. 11 minutes to Hawaii pass, the final pass of the morning over this station. At 14:58 Greenwich mean time, Skylab Control.

END OF TAPE

SL-II NC-307/1

Time: 10:08 CDT, 11:15:08 GMT

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PAO This is Skylab Control; 15:08 Greenwich mean time. 50 seconds away from predicted acquisition at Hawaii as the Skylab space station comes over the horizon. It'll be in view of Hawaii for about 6 minutes and after about a 5-minute gap, will be picked up again by Goldstone for fairly solid stateside tracking pass; Goldstone, Texas, Mils, and, Bermuda. Now nearing the end of revolution 302 and the start of revolution 303. We have AOS at Hawaii, standing by for air-ground communications.

CC Skylab, Houston. AOS 6 minutes.

SC Hello, Houston.

CC Go ahead, Skylab.

SC Okay, this is the SPT. Are y'all ready for me to inhibit the TACS this morning?

CC That's affirmative, Joe.

SC Okay, that'll be in work momentarily.

Meanwhile, I'd like to tell you about some progress we've made in riding the bicycle, so you can pass it along to the M171 CI.

CC Okay.

SC For their consideration in determining our protocol, we have discovered - we have made an amazing breakthrough, that the - Stand by one. That if you run the bicycle with no restraints at all, you can almost achieve your ground work protocol. And we'd very much like to let the PIs get - for the PIs to let us run one more M171 protocol at our nominal rate to see what happens. Over.

CC We copy that, Joe. How far are you having to lean forward? Wan you say a bit about your technique?

SC Okay. We'll, there's three things to do with your hands. Obviously there going to take up part of the strain. One is to put them on the pedals, - I mean on the handlebars.

CC Okay.

SC Ideally, the handlebars would be longer than they are now and would kind of sweep down around you so you could grab them in the right place. Another is to grab the center adjustment strap between your legs and hold on to that. And a third way is to put your hands on the overhead and push. And if you alternate those 3, you use different arm and shoulder muscles, and it's really pretty good.

SC Hey, Bill?

CC Go ahead.

SC I just ran my flight protocol block 5 minutes of 175 for a total of 20 minutes, and at the end of run, I had a 151 heart rate. And it's much closer to ride the bike on the ground. It's - it's so much better it's

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unbelievable. That restraint really is just a hindrance to you, and we've had to use different buckles in riding it. When you're riding holding on to the handlebars, you're more closely approximating running rather than riding a bicycle. When you ride holding on to the strap with the strap pulled down, it's sort of like if you see a cowboy get on a bronc. That's the way you're holding yourself on there. Ah - bareback bronc, and when you ride it that way, that uses the muscles in your legs the absolute closest to the way it is to riding a bike in lg on the ground. And when you put your hands over your head you get you can adjust your body back and forth to achieve something inbetween running and riding on the ground.

CC Thank you very much.

CC Hold off on the TACS inhibit until after the EREP pass, Skylab.

SC Okay, will do. And another little note on the bicycle, Bill. We did a little inflight maintenance this morning. With the onboard lubricant, we lubricated the squeaky pedals.

CC Copy that also. How do you feel that a restraint - an over-the-shoulder restraint would work? Do you think this would be more effective - a relatively fixed one that was well padded? Not straps.

SC Oh, it'd be worth a try. Bill. But based on the shoulder restraint we have, the big problem with it is that it interferes with respiration. And the waist restraint interferes with leg motion and circulation.

CC We copy that, Joe, and thank you very much.

SC Aye-aye.

SC Hey, I think Joe hit the right (garble) there when he said a set of handlebars that sweep further back around you, sort of out and around your sides, where you can close your arms along the vector that your riding the bike and pedaling it at, which means that you're doing - We're obviously expending work through our arms that's showing up in the data, and that's why they're cutting our data back down, in my mind, besides the restraint harness being a hindrance, because you've got to hold yourself down somewhere, so you are expending energy through your arms which is showing up - not showing up in the bike work.

CC Copy that, Pete.

SC But you sure expend the least doing it the way Joe just described.

CC And we'll pass this on and get you a word back. And we're going LOS here in about a minute. We'll see you at Goldstone at 15:22.

SC Roger.

END OF TAPE

SL-11 MC309/1

Time: 10:16 CDT, 11:15:16 GMT

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PAO This is Skylab Control. Space station Skylab now in a gap between Hawaii loss of signal and Goldstone acquisition of signal. We'll leave the circuit up for the next 4 minutes during this gap, and continue on through the stateside pass. At 15:17 Greenwich mean time, Skylab Control.

CC Skylab, Houston; AOS for 5 minutes.

SC Roger.

SC Houston, you got nothing else right now.

Let me give the EREP guys a couple words on this alignment jazz.

CC They're pretty interested. Go ahead, Paul.

SC Apparently, as you try to make these adjustments, which are tight, the visible align adjustments cannot make without deflecting the cooler in the optical (garble). But apparently what happens over a period of 5 to 10 minutes then with the vibration of the pump is that is the thing settles back. Now I'd lost the thermal, I started the search procedure, (garble) the pad over again, found it again; I got 42 to 45 percent back. That's what's going to stay. I'm trying to get a nice focus on the visible. I'd blown the whole stinking invisible and it was down to nothing on the right, and 30 on the left. And while I was finding the thermal again, I looked back to visible and it was back up to 80 on the left. So it's all kind of a mystery. The machine seems to run itself; it gives you an alignment if it wants to. Right now I'm using the drink it up and go away for 3 minutes routine and hopefully we'll have some fairly good readings for this EREP today.

CC Copy that.

SC Houston, SPT.

CC Go, SPT.

SC I haven't got a ready light this morning on the white light coronagraph. And I'm not sure why. Would you ask your people to look at it, please?

CC Wilco.

CC ATM says your discriminator is still firing, and you need to go a bit more Sun center, Joe.

SC Okay.

SC Is the scale (garble)

SC You there, Houston?

CC We're standing by.

SC Okay, it's SPT with another ATM question.

On the unattended operations, when we power down, you guys want the EVA auto door switch in storage or in inhibit? I'm not clear on that point.

CC Joe, want to leave that in inhibit.

BL-11 NC508/2

Time: 10:16 CDT, 11:19:16 GMT

6/4/73

SC

Okay, we'll change the cue card.

SC

(Music)

CC

I'll take it.

END OF TAPE

SL-II NC-509/1

Time: 10:28 CDT, 11:15:28 GMT

6/4/73

CC I take it that is Conrad and his
wardroom ensemble.

SC Boo, Bill. You can do better than
that. This is identify the music contest. We'll give
a steak dinner to the first person who can identify that
composition.

CC Stop the music.

SC Let me ask you one more ATM question,
Houston, on H-alpha 1.

CC We're going LOS here, Joe. I'll pick
you up again in a few minutes.

SC (garble) INTERLOCK switch is OVERRIDE,
momentarily. Over.

PAO This is Skylab Control. A brief gap
here between Goldstone loss of signal and Mila acquisition
of signal; about a minute away from reacquiring. Science
Pilot, Joe Kerwin, the long-hair music fan aboard the Skylab
crew, was playing a cassette tape recording of Sergei Rachmoninoff's
variations on a theme by Paganini, of Paganini; and a sort
of musical recognition quiz for the ground. 15:30, standing
by; 40 seconds to acquisition through Mila. Skylab Control.

CC SPT, Houston.

SC Go ahead.

CC Joe, you were going over the hill on
that last transmission and if that was about the H-ALPHA NIGHT
INTERLOCK switch, leave it on OVERRIDE.

SC It was and thank you very much.

SC Hello, Houston. I got an alignment
back (garble). I refuse to try to tweak it anymore. I don't
want another 45 minutes of mental agony.

CC We copy that, Paul, and we're in
complete agreement down here.

SC Okay, let me give you the numbers on
this now. Stand by.

SC The thermal reads about 45, and let
me give you the micrometer settings, which are different.
The micrometer settings are now 5156 - correction 5152 and
530X.

CC Copy.

SC The visible readings are 90 percent
on the left scale, 52 percent on the right.

CC Copy.

SC Can't you guys do something about
arranging better weather on the east coast? We haven't gotten
a good shot of that yet.

CC We're working on that one, Pete.
As you know, Texas sends most of its clouds over there.

SC We just saw an interesting weather
phenomena up here - air traffic control phenomena. Right over

SL-II NC-310/1

Time: 10:40 CDT, 11:15:40 GMT

6/4/73

PAO This is Skylab Control. Loss of signal through Bermuda; final Ascension Island pass of the morning and for the next several orbits. In about 6 minutes, acquisition at Ascension. Skylab space station now at the start of revolution 305. 15:42 Greenwich mean time, Skylab Control; still on the air for the upcoming Ascension Island pass.

END OF TAPE

SL-11 MC-309/2

Time: 10:28 CDT, 11:15:28 GMT
6/4/73

Lake Superior there must be a climb corridor out of one of the major cities there. There were six parallel (garble) all strung out side by side that obviously come up on some departure route, and the clouds were such that the clouds remained, and you could tell by the - went through the cloud how old it was with relation to the next one. You could probably know the airplane spacing and figure out how fast the clouds spread.

CC Yeah. We copy, Pete.

CC Pete, did you ever happen to see anything of that tropical depression that we pointed out off Mexico a day or so ago?

SC Yeah, we did, but it didn't look like it amounted to too much at the time.

CC Copy.

CC SPT, Houston.

SC Go ahead.

CC We have an update to the cal rock on the pass at 18:24.

SC Stand by 1.

SC Go ahead.

CC Put the XUV SLIT BIAS switch IN and point to the following coordinates: roll, minus 10800; down, minus 135; right, plus 150. This will probably position the HCO raster and other grading scans for the first three orbits of cal rock observations. And this change is because of a shift in the area of observations of the (garble) regions.

SC Roger. Okay, how is the cal rock getting along? Is it on schedule?

CC It's on schedule for 17:00Z lift-off, Joe.

SC Okay.

CC Skylab, LOS in 1 minute. Ascension at 15:48.

SC Bye.

END OF TAPE

SL-II MC-511/1
Time: 10:47 CDT
6/4/79

CC Skylab, Houston; AOS, 9 minutes.
SC Roger.
CC And, Skylab; we'll be dumping the tape
recorder over Carnarvon, your next pass.
SC Okay.
CC Skylab, LOS in 1 minute; Carnarvon, 16:20.
SC Roger.
CC And have you had any luck on the primary
fine Sun sensor so far.
SC Haven't tried it yet, Bill.
CC Copy.
PAO This is Skylab Control; 15:59 Greenwich
mean time. Loss of signal through the Ascension Island tracking
station in the South Atlantic. Next station coming up,
Carnarvon in 20 minutes, Carnarvon, Australia. And Guam and
then the upcoming stateside pass will be the data take
period, starting at 12:04 central daylight time, running
through 12:16, for Earth resources pass number 4 of this
mission. 20 minutes to Carnarvon. At 16:00 Greenwich mean
time, Skylab Control; out.

END OF TAPE

SL-11 MC512/1

Time: 11:19 CDT, 11:16:19 GMT
6/4/73

PAO This is Skylab Control; 16:19 Greenwich mean time. Acquisition at Carnarvon, Australia, in 40 seconds approximately; probably a little sooner than that. The crew of Skylab space station presently involved in preparing for the Earth resources survey pass which starts at 12:04 central daylight. We have acquisition data coming in from all vehicles. So at this time we'll stand by for the Carnarvon and Guam pass.

CC Skylab, Houston. AOS Carnarvon, 10 minutes.

SC Roger, Houston.

SC Hey, Bill.

CC Go ahead.

SC I could have put this on B channel, but they just started dumping a recorder. Pass to the followon crews, will you. I've - the slip to soft boots, the slippers with the zippers up the sides. I've worn mine about 3 or 4 days and you tend to try to polk your toes in things and under things and that, and I've about torn the toe off. The whole toe is worn out. So, if they think they want to wear them, they'll probably have to bring some extra ones up.

CC We copy that.

SC Hey, Houston, CDR.

CC Go, CDR.

SC See something was going down the crack here, check something out for me. No - that's not right either. Oh, never mind I found it. Forget it.

CC Okay, Pete.

CC SPT, Houston.

SC Yes, sir.

CC Your H-Alpha 1 camera appears to be still running.

SC Oh, yeah. Okay.

SC Did that do it, Houston?

CC We'll be with you in just a second, Joe. We're looking.

SC Okay. It looks like we have turn the auto switch off every darkside. I'm going to have to sit down and write a new sunside prep and powerdown cue card.

CC We concur with that, Pete - er, Joe.

SC Okay.

CC Skylab, LOS in 1 minute; Guam, 15:34.

SC Houston, CDR.

CC Go CDR.

SC Okay. During sensitometry advance we had half lights on cameras 3 and 4. And they did advance, in fact,

SL-II MC512/2

Time: 11:19 CDT, 11:16:19 GMT

6/4/73

40 frame counts. But to doublecheck, we took them off, brought the film back, put them back on again and then run the film, in fact, does advance. Put them back on, we only had one (static).

PAO
mean time.

This is Skylab Control; 16:32 Greenwich

END OF TAPE

SL-II MC-513/1
Time: 11:33 CDT
6/4/73

PAO This is Skylab Control; 16:32 Greenwich mean time. A brief gap here between Carnarvon and Guam. Skylab commander, Pete Conrad, describing to the ground some troubleshooting he was going through on some of the S190A multispectral camera film transports. He had two cameras of the array that were not giving him ready lights. And as he went over the hill and he was describing to CAP COM, Bill Thornton, the steps he had taken to correct this malfunction in preparation for the upcoming Earth resources data survey across the Midwest of the United States and on down through the Georgia and South Carolina coast, and Puerto Rico and Virgin Islands. Standing by for Guam.

CC AOS for 10 minutes. And, CDR, we lost you as you were talking over the hill that time.

SC Houston, CDR.

CC Are you calling, Skylab?

SC Roger, Houston. How do you read the CDR?

CC You're loud and clear now, Pete. Go ahead.

SC Okay, C7 is only 28. Do you want me to turn the cooler on or not?

CC Stand by half.

CC Pete, they want you to turn the cooler on.

Turn the cooler on.

SC Roger.

CC Skylab, LOS in 1 minute; Goldstone at 16:59.

PAO This is Skylab Control. Loss of signal from the Guam Island tracking station. Currently, the power usage aboard Skylab space station is standing around 3700 watts, as the crew prepares for the Earth resources data take across the continental United States. Average battery state of charge - 68.9 percent; and the space station just came into daylight, so that number will be going up as the solar array wings on the ATM begin feeding electrical power into the charger battery regulator modules, and building the batteries back up. Thirteen minutes to acquisition at Goldstone and the stateside pass for groundtrack 19 and Earth resources survey pass number 4 in this Skylab II mission. At 16:46 Greenwich mean time; back in 13 minutes, Skylab Control.

END OF TAPE

SL-11 MC-514/1

Time: 11:59 CDT, 11:16:59 GMT

6/4/73

PAO This is Skylab Control; 16:59 Greenwich mean time, about a minute away from acquisition through Goldstone. Coming up now on the Earth resources data survey for the day. Beginning up around the Powder River basin in Wyoming and Montana and ending - -

CC Skylab, Houston. AOS for approximately 16 minutes.

SC Roger, Houston. How do you read?

CDR.

CC You're loud and clear, sir.

SC Okay, we're on VOX as EREP operator.

PAO - - and ending around the Virgin

Islands in Puerto Rico. Cloud cover ranges about 0.4 to 0.7 cloud cover along most of the track and 0.8 to complete cloud cover in northeastern Missouri and western Tennessee. And 8 to 0.8 to complete in the Puerto Rico area.

PAO Skylab crew in the voice actuated VOX mode on the intercom as they get set up to begin the Earth resources data pass. We should hear them go down through the checklist as they activate each of the experiments and cameras through the entire 12 minutes of this pass.

SC ALTIMETER to STANDBY. I give it to you 01:40. I need an AUTO CAL.

SC 01:30, EREP system START. Stand by for AUTO CAL.

SC MARK. AUTO CAL.

SC We'll be passing my two (garble) in about 30 seconds on the right?

SC Definitely.

SC Yeah.

SC Okay, MARK. S92 mode READY. (Garble) mode, AUTO. (Garble) ON. SCAT's ON.

SC I've had camera 3 half light, and I get an intermittent RAD/SCAT gimbal light.

SC MARK. 193 polarization 4.

SC MARK. SCAT. Stand by.

SC MARK. RAD. Stand by. Cross track contiguous; X cross track contiguous.

SC MARK. RAD OFF. SCAT OFF.

END OF TAPE

SL-11 NC515/1

Time: 12:08 CDT, 11:17:08 GMT
6/4/73

SC MARK. SCAT, STANDBY. MARK. RAD STANDBY.
In track contiguous. MARK. RAD, ON; SCAT, ON. MARK. S192,
Check. 84 MODE, MANUAL, monitors C1. It's reading 17. And 20,
I'll read it. MARK. 10:20 C1 to read 17. MARK. SCAT, STANDBY,
10:40. MARK. RAD, STANDBY 10:42. ALTIMETER ON; 11:10, C1
reads 91. MARK. 11:55, C1 reads 88. (Garble)

PAO This is Skylab Control. We have con-
formation that the Harvard College Observatory Calibration
Rocket was launched on time at 12:00 noon central daylight
time from White Sands Missile Range.

SC 14:05 C1 went off-scale, 100 percent.
It's coming back on at 99 - 95. S194 to check. Our mode,
MANUAL - excuse me 14:50, we're standing by for altimeter
standby.

SC Go over anyhow, Paul. And an intermittent
blinking malf light on 194. 192 mode, READY; ALTIMETER is
ON; and, Joe, you're standing by 16:30 to go FI.

SC How would I get a blinking tape motion
light? Yeah. It don't - no - yes, sorry. Yeah, I got a
blinking tape motion light. In high speed, 192 is running.
The interval is about oh, 3 or 4 seconds, off. On for
about (garble) 20.

CC Skylab, Houston; LOS in 1 minute.
Carnarvon at 17:58.

SC Okay.

SC 192 mode, STANDBY. 16:36, S190, ready
light's out Altimeter to STANDBY, AUTO CAL. I got it.
93 Red, OFF; SCA: OFF; 193A, OFF; 194, OFF.

PAO This is Skylab Control; loss of signal
as the crew of Skylab completed today's Earth Resources
Experiment Package S, over the Continental United States,
portions of the Western Atlantic, along the Sea Board and
over Puerto Rico and Virgin Islands. Skylab space station
starting revolution 304. Next station in 40 minutes
Carnarvon, Australia. A. 17:18 Greenwich mean time, this
is Skylab Control.

END OF TAPE

SL-11 NC-316/1

Time: 12:58 CDT, 11:17:58 GMT

6/4/73

PAO This is Skylab Control; 17:58 Greenwich mean time. Less than a minute now away from acquisition at the Carnarvon, Australia tracking station. We understand that although the calibration rocket of the Harvard College Observatory was launched on time, that for some reason it failed to fulfill its mission and as we understand it, was destroyed by the range safety officer at Whitesands. We have no further details at this time. The CAP COM will relay this up to the crew very shortly.

SC Hello, Houston.

CC SPT, Houston.

SC Go ahead.

CC They lost the cal rock, and so you need to go to the no cal rock pads; that's 11:29, the beginning time on that.

SC Okay, I've got it. I'm sorry.

CC Okay, and they'll hold for the next four passes. There were problems - -

SC Roger.

CC - - There apparently were steering problems in the rocket. It was destroyed.

SC Okay, Bill.

CC By the way, the ATM data has looked very good today.

SC Good.

CC Skylab, that was not just for today. It's a quick look at S055/52 XUV monitor; says they're all obtaining first rate solar data and will make a significant improvement on solar physics.

SC Good deal. We'll do the best we can from here on out.

SC Okay. Now get to your message. What are you leading up to?

CC They say they like what you're doing. Just keep it up. You couldn't possibly be getting a little paranoid after this morning's procedure, could you?

SC You're not talking about that fourth guy that wanders in out of the 191 alignment box, are you?

CC What do you call him, Pete?

SC The other two guys are convinced I'm off my trolley. They say I even like the bicycle now.

CC Sounds dangerous. By the way, Paul, and anyone else who was involved in that 192 this morning, the work was greatly appreciated here and also at - from a first look, it appears to have been worth the effort.

SC Okay. Well, I must say, I was - as you probably guessed, I was convinced we weren't going to make any money, but we sure did.

SL-II NC-316/2

Time: 12:58 CDT, 11:17:58 GMT
6/4/73

SC Also, Bill tell the EREP guys that on the - right after the A record - B record, there's a very important message for them.

CC Copy.

SC It's my way of saying I screwed up, and I'm embarrassed to tell you over the open loop.

CC Copy.

SC Hey, also, time to put another message on B channel for them to base - to the EREP pads for us that'll preclude any more happenings such as what happened, and - Because this checklist is just about unusable up here. It's got lines through it. It's got latest updates crossed out for the latest updates, and we are going to give up on the checklist. Paul and I are going to sit down and write a card in about an hour, and we'll make some recommendations through some things on the - on the pads that are good last minute checks to make sure that we've got everything done. Okay?

CC We copy, Pete. Bruce says there are some blank cue cards in the data file.

SC Yes, we've already dug them out.

CC Apropos your statement about Pete liking the bicycle more. Are all of you finding any increased interest in the bicycle?

SC That's a negative.

CC (Laughter) Copy.

SC I'm going to race old Paul. Six weeks after he's back, they'll call him butterball again.

CC Copy. We'll be LOS in a minute. We'll have you again at Guam at 18:13.

PAO This is Skylab Control; 18:07 Greenwich mean time. Loss of signal for the final Carnarvon tracking station pass of the afternoon. Coming up on Guam also for the final pass this afternoon over that station. Skylab space station now over the Republic of Indonesia. It'll cross over the Philippine Island chain as it sweeps northeastward on the latter part of revolution number 304. We'll stay up live for this gap of 4-1/2 minutes between Carnarvon and Guam. At 18:08, standing by; Skylab Control.

END OF TAPE

SL-II MC-517/1

Time: 13:11 CDT, 11:18:11 GMT

6/4/73

CC

Skylab, Houston; AOS for 5 minutes.

SC

Roger.

CC

We're going LOS. We'll see you at Goldstone

at 18:36.

SC

Roger, Houston. Good bye.

PAO

This is Skylab Control; 18:20 Greenwich

mean time. Loss of signal for the final pass over the Guam Island station of this afternoon. Acquisition at Goldstone for a stateside pass; one of two remaining this afternoon before the orbit moves out into the Pacific on the descending node; 15 minutes to Goldstone. At 18:21 Greenwich mean time, Skylab Control.

END OF TAPE

SL-11 NC-918/1

Time: 13:34 CDT, 11:18:34 GMT

6/4/73

PAO

This is Skylab Control; 18:35 Greenwich mean time. Some 50 seconds away from acquisition at Goldstone for the final pass of the afternoon in which the Skylab space station is directly over the continental United States. The succeeding revolution will be tracked by Texas and Goldstone, but it will pass somewhat offshore in the Pacific Ocean on the descending track going to the southeast. We have acquisition through Goldstone of Skylab. We'll stand by for resumption of air-to-ground communications. The crew, at this time, are in the midst of a meal period, noon meal, and may not have a whole lot to say. Skylab Control standing - -

CC

AOS for approximately 20 minutes.

SC

Roger, Houston.

CC

And, PLT. We have a message for you.

SC

Go ahead.

CC

The ergometer restraints raised some questions this morning among the biomedical people. And they would like, this afternoon, for you to run the PLT's M093 with ESS, that's panel 623, EXPERIMENT ACTIVATE switch in the M171 position.

SC

Okay. You want the regular M093 protocol and checklist, but just run the ESS in 171?

CC

They also want the blood pressure cuff left on through M093 and place the CUFF INFLATE switch to START at the beginning of the 93 run and leave it there. - the - your method of restraint, the one that you found optimum. They're looking at the affects on the VCG and BPMS data.

SC

Well, I figured that. I haven't tried this no restraint bit, as yet, but I'll try it this afternoon.

CC

We copy, Paul. Don't hurt yourself.

SC

I'll try not to. All right, you want the full 93 protocol and checklist; just put the ESS in the 171.

CC

That's right. And leave the blood pressure cuff on during that time, and have the switch activated for it.

SC

Okay.

SC

Houston, CDR.

CC

Go, CDR.

SC

Housekeeping 7 Bravo - 7 Bravo-3, 7 Bravo-4. Yuk! Complete.

CC

We copy. Complete. (Laughter)

SC

Pete, there was guessing down here the last time you had to pull that duty.

SC

On my day off.

SC

Skylab, Houston; CDR.

CC

We're still here. Go ahead.

SC

Okay. Standing by for your EGIL stuff.

SL-11 MC-518/2

Time: 19:34 CDT, 11:18:35 GMT

6/4/79

CC We're standing by.
SC Okay. I'll grab it.
SC Hey, Houston. Ah (garble) OWS here is
CONTROL 2 CB, CLOSED, and it's staying CLOSED.
CC We copy. Closed and staying closed.
SC Now, I noticed right next to it they
had OWS radiant heaters 1 through 5 CB as OPEN. Did you know
that?
CC We'll check, Pete.
CC They're aware of it, Pete. That's okay.
CC SPT, Houston.
SC Go ahead.
CC It appears that you're in ACTIVE REGION,
18. They'd like this pass run in QUIET REGION, 3.
SC Stand by.
SC Okay. Tell them I'll move. I initially
went to the (garble) they asked for, and in looking for good
cells, I moved back down across Sun center.
CC We copy. No problem.
SC Houston, CDR. The (garble) bottle res
decay PORTION has been activated and we now have the 4 BOTTLE
VALVE is OPEN, and the 2 BOTTLE VALVE is open.
CC Copy.
CC Pete, we're ready for you on your pad.
On panel 200 the MDA OWS HEATERS CONTROL 2, circuit breaker,
OPEN. We're ready for you to perform that.
SC Okay. It's open.
CC And we're going LOS here in about
1 minute. We'll have you Vanguard at 19:02.
SC Okay.

END OF TAPE

SL-II MCS18/1

Time: 13:53 CDT, 11:18:53 GMT

6/4/73

PAO This is Skylab Control; 18:52 Greenwich mean time. Loss of signal through the Texas tracking station. Skylab space station presently over the Isthmus of Panama. Starting revolution number 305. Next station in 9 minutes will be the Vanguard tracking ship for the first pass of the afternoon. From Vanguard to on around to the next station will be Goldstone. Almost an hour, a little over an hour actually, between Vanguard and Goldstone. Returning in 8 minutes for the Vanguard tracking ship pass. At 18:53, Skylab Control.

END OF TAPE

SL-11 NO-520/1

Time: 14:00 CDT, 11:19:00 GMT

6/4/73

PAO This is Skylab Control; 19:00 Greenwich mean time. About a minute and half away from acquisition at the tracking ship Vanguard. As the Skylab space station is now crossing into the northern portion of Argentina into central South American continent. Flight Director, Don Puddy, at the present time reviewing the - one of the initial cuts at tomorrow's Flight Plan, which includes Earth Resources Experiment Package number 5, survey track, survey along track number 34D. Apparently we have acquisition through Vanguard. We'll stand by to monitor the conversation through this station.

CC Skylab, Houston. AOS for 9 minutes.

SC Houston, CDR.

CC Go, CDR.

SC I'm about ready to go ahead with EIGL-4

CC Copy. We're standing by.

SC Okay, Houston. The OWS block 2 breakers stayed closed.

CC We copy that, and ground agrees.

SC Okay. That was from panel 613.

CC SPT. Houston.

SC Go ahead.

CC We'd like for you to inhibit TACS per procedure, at your convenience.

SC Aye aye.

SC Okay, Houston; bus - C&W bus 1, low volt, said TV closed and stayed closed - gone ahead and closed 2.

CC Copy.

SC Okay, it stayed closed, also. Going to 16:14 for the H. Make it H2O, not HSF bus 2, waste management H2O - no, heater's to right. H2O - heater closed, then opened.

CC Copy.

END OF TAPE

SL-11 NC521/1

Time: 14:06 CDT, 11:19:06 GMT

6/4/79

SC Okay, we closed it, Houston. And it stayed closed, and nothing happened to C&W bus 1 low volts or C&W bus 2 low volts. The both stayed closed also. And 614 HSS bus 2 waste management compartment, H2O heater closed, is now open.

CC

We copy that.

SC

And while EGIL is looking at that Houston, I'd like you to verify the configuration that I left the circuit breaker panel in the command module in, panel 226. Are you ready to copy?

CC

We're standing by. Go ahead.

SC

Okay, the cryo H2 heater, 1 MAIN A, 2 MAIN B. Circuit breakers, both of them are closed. The H2 heaters, 100 watt, 1 MAIN A, 2 MAIN B. Both are closed. H2O heater 50 watt, 1 MAIN B, 2 MAIN A, are both open. I mean O2 heater 50 watt.

CC

That's the desired configuration, Pete.

SC

Okay, very good.

SC

I just wanted to make sure because it said H2 heater 1 MAIN A closed, and that one was already closed. The rest of them were in the right configuration.

CC

Copy.

SC

And I'm standing by for your GO on panel 207.

CC

You're GO on that, Pete.

SC

Okay.

SC

Okay, Houston. They're both in ENABLE and that took care of the light.

CC

We copy, Pete.

CC

We're going LOS here about 1 minute.

CC

We'll have you again at Vanguard at

21:48.

SC

21:48, huh? Bye bye for a while.

CC

Belay that.

PAO

This is Skylab Control; 19:11 Greenwich mean time. Our next station acquisition is Goldstone in 1 hour and 2 minutes. The CAP COM looked at the wrong table apparently and gave the next Vanguard pass as being the next point of contact for the crew. But by the time he got it sorted all out, why - he - the space station had gone over the hill from Vanguard. Hence the comment from Conrad, bye bye for quite some time. One hour and 1 minute to Goldstone. At 19:12 Greenwich mean time, Skylab Control.

END OF TAPE

SL-11 MC-322/1

Time: 15:12 CDT, 11:20:12 GMT

6/4/73

PAO This is Skylab Control; Greenwich mean time, 20:12. Skylab space station is presently about to enter the acquisition of the Goldstone tracking station for lengthy stateside pass of approximately 12 minutes. Following the EREP pass on the last revolution, on revolution 204, the EGIL reported to Flight Director, Don Puddy, that we had 16 completes, 16 completes meaning that the 16 CBRMs, charger battery regulator modules, did come back on line at the return to solar inertial - solar inertial attitude following the EREP pass. We will hold the line up now for any conversation between the Cap Com, Dr. Bill Thornton, and the Skylab crew.

CC Skylab, Houston. AOS for 7 minutes.

CC Skylab, Houston. AOS 7 minutes.

SC Houston, CDR.

CC Go, CDR.

SC When you got somebody in the LBNP,

can you ride the bike, in the bike, in the exercise mode?

CC Stand by half.

SC Say again.

CC That's affirm.

SC Okay.

CC Skylab, we're - Goldstone is configured to receive XUV monitor TV for the next 7 minutes.

END OF TAPE

SL-II MC-323/1

Time: 13:17 CDT, 11:20:17 GMT

6/4/73

CC SPT, Houston. We notice you're still in the portable TV position. You have about 2-1/2 more minutes coverage.

SC

(Garble)

SC

Give us a 635.

CC

Skylab, we're going to LOS in 1 minute;

Vanguard at 20:40.

PAO

This is Skylab Control; Greenwich mean time 25 hours 59 minutes. The recent pass over Goldstone and Texas brought very little conversation from the Skylab crew. However, Commander Conrad did ask the ground, Dr. Bill Thornton, the Cap Com, requested whether you could ride the bicycle ergometer when someone is in the lower body negative pressure device. The ground said that's affirmative. What Commander Conrad was referring to, the fact that Pilot Paul Weitz was in the lower body negative pressure device, experiment M092, which is designed to establish the course of cardiovascular deconditioning changes caused by the zero g environment. The LBNP is used to stimulate the effect of gravity in space. The device is a cylindrical tank with a waist seal, which encloses the crewman's legs and lower body and simulates the presence of gravity on the circulatory system by applying a slight suction to the lower body. As Pilot Weitz is in the M092 experiment, this will be followed by the M093, the vectorcardiogram experiment. Meanwhile, Science Pilot, Joseph Kerwin, is at the ATM C&D panel, the control and display panel of the Apollo telescope mount. As the spacecraft nears the end of its 305th revolution, we will have acquisition at Vanguard in 12 minutes. This is Skylab Control at 20 hours 27 minutes.

END OF TAPE

SL-II MC-524/1

Time: 15:39 CDT 11:20:39 GMT

6/4/73

PAO This is Skylab Control, Greenwich mean time 20 hours 38 minutes. We anticipate acquisition of the Skylab space station as it crosses into the sphere of the Vanguard tracking station. We will hold the line up for any conversation between Capcom Dr. William Thornton and the Skylab crew.

CC Skylab Houston. AOS for 8 minutes.

CDR Roger Houston.

CDR We're watching the biomed data and

we've got Paul just about ready to start his run (garble) 93.

CC We're watching it Pete.

PLT Houston, are you there?

CC We're still here, go ahead.

SPT This is SPT. We're back on the primary fine Sun sensor.

CC Copy SPT.

SPT Just drove the thing straight up, about a - a half a radius up to (garble) she turned around and started coming back in.

CC Copy. And Skylab we will be LOS in about a minute. We will see you in Hawaii at 21:48 yet. And a couple of questions. Did you have any problems cleaning the solenoid vent screens? Also the tape recorder will be dumped over Hawaii on the next pass.

CDR Answer is negative.

CC Copy.

PAO This is Skylab Control. Greenwich mean time 20 hours 49 minutes. On the recent pass over the Vanguard tracking station, Commander Conrad reported that Pilot Paul Weitz was ready to start the M093 experiment, the vectorcardiogram experiment. This experiment is performed on each of the astronauts every 3 days during the mission. The experiment consists of the astronaut riding the bicycle-ergometer, and he is set up with a set of 8 electrodes, which are attached to his - his body. And this records the heart rate, temperature, etc. during the bicycle-ergometer run. Next acquisition is over the Hawaii tracking station in 58 minutes from now. As the space station starts its 200th, 300th, excuse me, 307th revolution of the Earth, this is Skylab Control, Greenwich mean time 20 hours 50 minutes.

END OF TAPE

SL-11 NC-525/1

Time: 16:11 CDT, 11:21:11 GMT

6/4/73

PAO

This is Skylab Control, Greenwich mean time 21 minutes - pardon me. Greenwich mean time 21 hours 11 minutes. It has been announced by Dr. William C. Schneider, Director of the Skylab Program, NASA Headquarters that an EVA will be scheduled no earlier than Thursday, June 7th for the purpose of deploying the solar panels. The statement following Mr. Schneider's review of the subject at Marshall Space Flight Center follows: A comprehensive review was held today at the Marshall Space Flight Center to examine the possibility of an EVA to deploy the stuck solar array on the Skylab workshop. In addition to the senior Skylab officials and technical personnel, the following were present: Deputy Administrator, Dr. George Lowe, Dale Myers, Center Directors Dr. Kurt Debus, Dr. Christopher Kraft and Dr. Rocco Petrone. The current and projective status of electrical power situation was reviewed as well as its effect on the conduct of the mission. It was shown that without electrical power augmentation, the experimentation on current Skylab mission would continue to be curtailed and constrained, and that for the next two missions, the 56-day duration probably would not be possible. The proposed EVA procedures were explained and described by Astronaut Russell Schweickart, who had helped develop the techniques in the Marshall Space Flight Center Neutral Buoyancy Facility. They were demonstrated to be feasible and relatively straightforward and no unusual safety hazard was found. Energy sources, dynamics and possible debris hazards were analyzed. It was concluded that the planned EVA was comparable to the normal Skylab EVA and that the potential gain outweighed the risks involved. Therefore an EVA has been scheduled for no earlier than Thursday, June 7th for the purpose of deploying the stuck solar panels. Details will be developed in the next few days. Dr. William C. Schneider will be available for a press conference in the news room in building 1 at the Johnson Space Center no earlier than 7:00 p.m. central daylight time. This concludes the announcement from Mission Control Center. Next AOS will be over Hawaii in 34 minutes.

END OF TAPE

SL-II MC-526/1

Time: 16:46 CDT, 11:21:46 GMT
6/4/79

PAO This is Skylab Control, Greenwich mean time 21 hours 46 minutes with live air-to-ground over Hawaii.

PLT Okay, for whatever it's worth, after we finished the MO-93 and our new free form style of riding the bicycle, I rode my standard preflight protocol at the end of the second step, that is after 10 minutes, my heart rate was 130. At the end of the third step, after 15 minutes, my heart rate was 153.

CC

We copy that Paul, thank you.

CC

Paul, while we're on that subject, the biomedics here want you to go in the unrestrained mode in the future on 171, that's all crewmen.

PLT I really think - today's the first day I tried it out, Bill and during the 93 part, I was really you know, trying different positions, so I probably got my heart rate up a little higher. I don't even know what I've been running on that, but suprisingly it's a revelation. It really is to me, this being my first time, that it's so much easier than strapping yourself down. You're fighting the straps as much as you're working the bicycle I think with all those - that paraphernalia you've got on.

CC

Okay, we copy, Paul. Was there anything in particular about the straps that were giving you trouble?

PLT

Well, I'd say yes. In forcing myself down on the seat, I felt that I really had to pull down on that front restraint, the one that's got the parachute cone on it, and in so doing that the bottom edge of that weight belt dug into my leg just about the femoral artery there and I felt that it was interfering with good circulation to the leg. Plus the shoulder straps down tight interferes with respiration.

CC

Copy, Paul. Thank you.

CDR

Hey, Houston. I got a mystery for you.

CC

Go ahead, CDR.

CDR

I was just cruising through the middle of the OWS and I came across a DAC, that's a Delta Alfa Charlie fuse floating and so I just got a search throughout the vehicle - all four cameras that are out, rest of the cameras that are stowed and the DAC fuse supply and they're all accounted for. So, my question is, and it may have been reported, it maybe not rreported, I think somebody must have dropped one in the vehicle during tests and it's just finally made its way out. At least I hope so, or we've got a pregnant DAC fuse around here that's not fessing up.

CC

Hey, Pete is that the only loose item you found?

CDR

Well we've found lot's of loose items, but this is the only one I can't account for where it came from.

SL-II MC-326/2

Time: 16:46 CDT, 11:21:46 GMT

6/4/73

CC We copy. Hey, Pete we're changing - the blood drawing has been changed from 156 to 157. Now, we have a stowage message ready if you want it, but if you like, you just go ahead and handle the stowage yourself. If you need the message give us a call.

CDR Stowage message for blood drawing?

CC This is for stowage of the blood in the urine sample return container.

CDR No, we're in good shape on that. We don't need it.

CC Pete, are there any specific Nikon problems?

CDR The counter failed to work on the Nikon - wait a minute, I got it right here.

CC SPT, Houston.

SPT Go ahead.

CC We're configured at Hawaii for XUV TV monitoring.

SPT Hawaii. Is that where we are now?

CC That's affirm.

SPT Okay.

CDR The Nikon O-1, the upper film counter failed at 22 on the last roll of film and so far it's working on the new roll of film, but we're only up to five pictures on it. By the way, that is 21-34 - well you'll get it on the film report tonight and we're using it out the window and 160

CC We copy, Pete.

CDR But that's the only Nikon problem I know of. We had the base problems but that was very briefly on the Hasselblad.

CC Yes, we copied that - -

CDR It was recycling and it -

CDR Go ahead.

CC We copied the Hasselblad copy. We copied a Hasselblad problem earlier.

CDR Roger, now we've got a new magazine on there and again it's started to count over again and we'll see what happens.

CC We copy, Pete.

CC Skylab, Houston, LOS in one minute. We'll see you at Vanguard 22:16 and SPT if you would close the SO-52 door at the end of your ATM activities since you're a bit off Sun center.

SPT All right.

PAO This is Skylab Control, Greenwich mean time 21 hours 55 minutes. In the present pass over Hawaii Pilot Paul Weitz discussed with Cap Com Dr. William Thornton how much easier it is to ride the bicycle ergometer without using the restraint straps provided. He said it's suprisingly

SL-11 NC-326/3

Time: 16:46 CDT, 11:21:46 GMT
6/4/73

easier to ride without having the utrape on. Heretofore the straps were used and the crew had complained in the difficulty in riding the bicycle ergometer. Commander Conrad reported a slight mystery to the ground. He found a DAC fuse, data acquisition camera fuse floating in the workshop. He says - he said it probably was dropped during fabrication and it's just turned up. This is Skylab Control at 21 hours 56 minutes Greenwich mean time. Our next acquisition will be over the Vanguard tracking station in 20 minutes.

END OF TAPE

SL-II NC-527/1
Time: 17:13 CDT 11:22:13 GMT
6/4/73

PAO This is Skylab Control. Greenwich mean time 22 hours 13 minutes. As the Skylab space station approaches the Vanguard tracking station. The crew has approximately 4 hours and 45 minutes remaining in their 11th day in the Skylab space station, with dinner and 2 more hours worth of work at the Apollo Telescope Mount control and display panel. We will pick up any live air to ground at this time.

CC Skylab Houston. AOS for 10 minutes.

PLT (garble) Houston.

CC And we will be dumping a tape recorder over Hawaii on this upcoming pass.

CC CDR Houston.

CDR Go ahead.

CC At your convenience, we'd like the MOL SIEVE B FAN ON.

CDR Okay. It's ON.

CC Copy.

CC Skylab Houston, AOS in 1 minute.

Correction, LOS in 1 minute. Hawaii at 23:23.

SPT Roger dodger, Houston.

PAO This is Skylab Control. Greenwich mean time 22 hours 16 minutes. We have had loss of signal of the Skylab space station as it passed over the Vanguard tracking station. The only conversation between Capcom Dr. Bill Thornton and the crew was concerning asking the crew to turn on the MOL SIEVE FAN B. The MOL SIEVES are devices located in the airlock module, which removes carbon dioxide and water from the Skylab atmosphere. Next acquisition will be over Hawaii in 56 minutes. This is Skylab Control, Greenwich mean time 22 hours 27 minutes.

END OF TAPE

SL-11 NC-528/1

Time: 18:21 CDT 11:23:21 GMT

6/4/79

PAO This is Skylab Control, Greenwich mean time 23 hours 21 minutes, as the Skylab space station approaches the Hawaii tracking station on its 307th revolution. We'll hold the line up for air to ground conversation with Capcom Hank Hartsfield.

CC Skylab Houston, through Hawaii for 10-1/2 minutes.

CDR Henry, you old rascal. How was the week?

CC Hello there. How's it been?

CDR We missed you.

CDR Hey Henry. I've got a question for you.

CC Go ahead.

CDR Are we going EVA?

CC Well, I've got a little word for you too. They had a big old meeting here today, and the outcome was that we're going to do one, and it will come no earlier than Thursday.

CDR Okay that's good. We've got a proposal for you for that then. We've been having a great deal of discussion up here about our work load. And the work load that you have up at right now is an extremely satisfactory one. And as a matter of fact, it's quite relaxed and it is what we like. It's what we would recommend for the 56 day mission. And it is I think on our flight essential enough to get data done and some of these experiments done, and seeing we're going to lose another day going EVA, we would like to propose that you continue our work schedule as is on our 2 days off. In that we don't want the days off now, we have enough time to ourselves in the evening that we can relax. We're managing to stay on top of everything and occasionally get ahead. And so we would like to run EREP on those days off and ATM or however the schedule works or any other things that you have. Just run this particular type work load you've got us on now right on through the end of the mission. How does that go?

CC Okay guys, we'll feed that in the hopper and see how it comes out.

CDR Okay, I want ya'll to understand that I'm not proposing this in the manner that it applies to the 56 day flight. I think the time line that we're on right now is great for 56 days, but you have got to give those guys a day off every once in a while. Now we've had 1 day off. We've been on this light, relatively light load

SL-11 MC-528/2

Times 14:21 CDT 11:23:21 GMT

6/4/73

that we can stay ahead of problems and everything. And we think breaking the monotony with an extra EVA is good for us. We would like to give our remaining 2 days off to the experiments.

CC

I know they're rooting for you there.

We'll feed that in and get you an answer back Pete.

CDR

Very good, thank you.

CC

And for info, on this pass we're going to be bringing up secondary coolant loop, and primary coolant loop, and you'll probably get a caution and warning. And also we'll be bringing the third gyro on each axis for redundancy management so we can mark the drift.

CDR

Good.

CC

And Pete, for info, Rusty is going to be in at about 02:30 over Guam for a little chat about the EVA.

CDR

Good.

CDR

We got it.

CC

Roger.

END OF TAPE

SL-II MC-529/1

Time: 18:28 CDT, 11:23:28 GMT

6/4/73

CC Skylab, Houston. We're about 40 seconds from LOS. We'll be coming up on Vanguard at 55 and it looks like MO-92 vent shoved us out of plane again and in all likelihood the star tracker will not acquire again and we'll be wanting you to bring it up.

SPT

Okay.

PAO

This is Skylab Control, Greenwich mean time 23 hours 33 minutes. As the spacecraft passed over the Hawaii tracking station Commander Conrad asked Capcom Hank Hartsfield - Astronaut Hank Hartsfield is a member of the Skylab support team - He asked them whether or not the crew would be going EVA. Hartsfield replied yes, there was a plan to go on Thursday. Conrad also relayed to the ground the good work schedule that they've been working under for the last several days and he proposed that, since they will have an EVA, he proposed that the crew forego their two scheduled days off for the remainder of the mission to play catch-up, do some JREP and some other experiments. Hartsfield replied by saying, "we will feed it into the hopper." Astronaut Hartsfield also advised the crew that Astronaut Rusty Schweickart, who is backup Skylab Commander for Skylab 2, that he will talk to the crew in approximately two hours on a pass over Guam on the 309th revolution. At Greenwich mean time 23 hours 35 minutes, this is Skylab Control.

END OF TAPE

SL-11 MC-530/1

Time: 18:52 CDT, 11:23:52 GMT
6/4/73

PAO This is Skylab Control, Greenwich mean time 23 hours 52 minutes as the Skylab space station approaches the Vanguard tracking station. We expect to have conversation with Cap Com Hank Hartsfield and the crew as the crew begins their pre-sleep activities. With Science Pilot Joseph Kerwin scheduled to spend another hour on the control and display panel of the Apollo telescope mount and Pilot Paul Weitz scheduled to spend another 55 hours - 55 minutes on the C&D panel later this evening. We'll leave the line up for any air-to-ground with the crew.

CC Skylab, Houston through Vanguard for 7-1/2 minutes.

PLT Rog, Houston. We'll be with you in a minute.

CC Okay. For the SPT, we're taking a look at this new Z thing and we decided that it'd probably be better not to chase it, so don't bring in the star tracker and we'll let the momentum settle out and let Paul do it when he goes up for his shift.

SPT Okay.

CDR Hey, Hank are you there?

CC Go ahead.

CDR Okay, the answer to your questions. Number one due to the increase in cabin air O2 percent during M-171 protocol, request you verify make-up O2 N2 as being inhibited during M-171 run and that is a fact. We've been turning off the cabin reg everytime.

CC Roger, copy.

CDR Okay, advise that the monitor was receiving power and yes the brightness and contrast were turned up during the TV camera problem. The camera was operating perfectly normally was being set up - when I say being set up, its location was being determined at the time and it was running showing a good picture and it just quit running. Now, the monitor that was on that camera has been tested on a good camera and the monitor is fine, the cables are fine, there are no bent pins, it just doesn't run. How did I determine the color wheel was not turning when the power was on? I took the lens off and looked in there, and secondly you can also hear it. (garble) jam in the bad camera is power connectors for bent pins or pushed-back pins and there are none.

CDR And the answer to question number six was yes, the contamination flowed over the OWS what that does is drag down the ice crystal in it.

SLT (Garble) okay and we'll catch up on some of the other questions.

SPT I'm trying to find my place.

SL-11 NC-330/2

Time: 18:52 CDT, 11:23:52 GMT

6/4/73

SPT Okay. Are you able to use the XUV monitor? To determine roll, yes, by integrating, not exactly the way we were in training but we are using it that way. To locate bright spots, no. Because we can't point to one and you know, go there continuously integrating and the basic picture is much too faint. So, coronal holds same thing, you really can't see them and a flare, we decided that to use the XUV mine as a flare detection tool, the flare has to be bright enough to show without requiring integration. Since we haven't had any flares we don't know whether that's true yet or not, we hope it is. Okay, question number eight. What it looks like looking in H-alpha-1 as we come around the terminator is that first of all the image of the Sun moves up and to the left about one solar radius or maybe a little more and then it kind of flashes and goes out as you disappear behind the darkside.

CC

We copy.

SPT

And that's all I've got.

PLT

Okay, and number nine, Henry was they want to know the estimate for rolling it around by hand to make sure it doesn't have too much set also. Well you probably don't know that either. I would say - I would estimate that amount was ten frames plus the 40 frames for sensitometry advanced plus one frame to make sure that in fact it was (garble) film plus four frames normal, whatever that adds up to.

CC

Roger, copy.

PLT

Number 10, negative.

SPT

Houston, SPT.

CC

Go ahead.

SPT

We'd like you to verify the number of pills you can just read the five digit numbers if SAO can find them for somebody -- mineral supplements that we were supposed to take this morning, we'd like to verify that we had it right.

CC

Okay, we're about 10 seconds from LOS. We'll have that for you at the next pass which will be over Vanguard again about an hour and a half at 01:33.

SPT

Okay.

PAO

This is Skylab Control, Greenwich mean time 00:03 minutes. On the previous pass over the Vanguard tracking station, Commander Conrad discussed with Hank Hartsfield Cap Com the difficulties they had earlier with the TV camera. The next pass will be over the Vanguard station in one hour and 42 minutes - no one hour and 29 minutes - excuse that - one hour and 29 minutes from now. Change-of-shift briefing with Flight Director Don Puddy is scheduled to start in the news room in building 1 momentarily. This is Skylab Control at Greenwich mean time 00:03 minutes.

END OF TAPE

SL-II MC-531/1

Time: 19:07 CDT 12:00:07 GMT

6/4/73

PAO This is Skylab Control. Greenwich
mean time 00:07 minutes. William C. Schneider, Skylab Pro-
gram Director, Flight Director Don Puddy, and Dr. John
Zeiglschmid, Skylab Flight Surgeon will begin a press con-
ference in the Building 1 News Room immediately.

END OF TAPE

SL-11 MC-533/1

Time: 20:37 CDT 12:01:37 GMT
6/4/73

CDR 19:45 to 20:00 or whenever he starts his TV19 set up. Make that PHPT and down at the bottom 22 to 23 50 make that the M171 CAL completely. I also believe you left a piece out of mine, that 2145 I think you have an S019 clean up for me, I found it buried in the details. I assume that is correct. If not we can straighten it out on tomorrow's flight plan. And that's about it.

CDR Now, I've got one other thing. One small bit on the EREP tape TV 12, it happens to be tape recorder 2. So, instead of the TV12 book, fortunately we looked at it tonight and we have taken our own set up into consideration to give you tape 2. And I passed that little bit on, the guys on the ground should have recognized that one and given us a little more time, because the set up with the work. Fortunately we found it tonight.

CDR And then the other thing is, are you still there?

CC Roger.

CDR The SPT says he doesn't want to be working ATM while he's listening to the EVA review tomorrow night.

CC That seems reasonable.

CDR Yeah.

CC CDR Houston, the film for the M151 will be A3 transporter 04.

CDR Okay, A3 04. Do you want the 30 percent, okay, I see it calls for 29 percent but I doubt very seriously if we'll take that much, we don't do that much food prep these days.

CC Roger and I have - -

CDR Will do.

CC I have the mineral supplements that Joe requested a while ago.

SPT Okay, fire away.

CC Okay. CDR is all balls. SPT is 10,000. And PLT is three balls 20.

SPT Okay.

CC I have a general question. Is the ice spot on the wardroom window still the same size, about the size of a dime?

CDR Yes, a little bit bigger than a dime, about the size of a nickel.

CC Roger, does it seem to be growing?

CDR Well, we got into a discussion about that and they have grown a little bit from its original state, but I think it is pretty stable.

SL-11 MC-553/2

Time: 20:37 CDT 12:01:37 GMT

6/4/73

CC And one more item for you. When Rusty talks to you tonight at 02:30, he would like for you to have the (garble) cue card available so he can reference locations on the workshop.

CDR Okay. We're going to have to look for that one. We think we can find it.

SPT Houston SPT.

CC Go ahead.

SPT The PLT says he's got an ATM pass coming up but the no cal rock his ATM schedule didn't have a 01:55 pass. So we don't have a pad.

CC That's the same cal rocker (garble) so go ahead and do the one it calls for there. And we're about 25 seconds from LOS. Ascension will be coming up at 46 and I think you have got your med conference there.

SPT Okay, we will if I can find it.

CC That's the 02:09 pass.

PAO This is Skylab Control. Greenwich mean time 1 hour 43 minutes. As the Skylab space station passes over Vanguard, the next pass will be over Ascension. In the Mission Control Center tonight is Donald K. Slayton, Director of Flight Crew Operations and Rusty Schweickart, backup Commander for Skylab II. Astronaut Schweickart is scheduled to talk to the crew and discuss the preliminary plans for the EVA, which is now set no earlier than Thursday. This discussion will come over the Guam tracking station in 46 minutes from now and that will be a 9 minute pass. We will leave the line up for any possible discussions over the Ascension tracking station.

END OF TAPE

SL-11 MC-334/1

Time: 20:44 CDT 12:01:44 GMT

6/4/73

PAO The Skylab space station has gone over the hill. We've had loss of signal at the Ascension station. Skylab is on rev 309 at the present time, crossing Nigeria on the continent of Africa. We expect to hear from the crew again at the Guam tracking station in approximately half an hour, and at that time, there will be some instructions passed up to them in connection with the upcoming EVA. At 1 hour 59 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-11 MC-333/1

Time: 21:27 CDT, 12:02:27 GMT
6/4/73

PAO This is Skylab Control, Greenwich mean time two hours 27 minutes. We will have acquisition of the Guam tracking station momentarily, as we await discussions with Rusty Schweickart, backup Commander for Skylab 2 mission, who will discuss with the crew the procedures that he has developed in the neutral buoyancy facility at the Marshall Space Flight Center on the activities to free the solar wing on the orbital workshop. We will hold the line up for any live conversation.

CC

Skylab, Houston through Guam 9-1/2 minutes.

SC

Hi, Houston.

CC

Okay, I got a few quickies before Rusty talks with you. We concur with swapping the N-171 cal with the PT and PH for the SPT, but let's caution you on your PT, no running around the ring lockers or disturbing the vehicle while SO-19 is in progress. And on the SPT pad, his detail pad, then if he wants to he can change the - where it - M-171 MA cal to 22:00 and we're going to give him a little more time on the ATM. Instead of starting at 01:05 on his last pass there, we'll start that at 01:37 and that'll be on the ATM pad when it comes up.

SC

Okay.

CC

Okay, since the TV-12 is set up to do tape recorder-1 and the light is not proper for tape recorder 2, scrub TV-12.

CDR

No way Hank, it's just the other way around. It was for TV for tape-1 and it's all set up to do tape-2.

CC

Okay, while that one's being discussed I got your pass times for in the morning. We have Honey-suckle from 10:52 to 54 and the next pass is Goldstone 11:20 to 11:30.

CDR

Okay, we'll wake ourselves up.

SPT

Skylab, SPT.

CC

Go ahead.

SPT

I left a message for Dr. Ross on B channel at 02:10.

CC

Roger, copy.

CDR

Also, Hank. I understand that they're not getting the evening status report that's on B channel. Can you confirm that? If that is the case, then I've wasted every evening putting it on B channel, I'd just as soon give it to you over the air on A channel with the rest of the evening status report.

CC

We'll check that one out, and Pete I understand that you're all set up to do TV-12 on tape recorder-2 change-out?

SL-11 MC-535/2

Time: 21:27 CDT, 12:02:27 GMT

6/4/73

CDR That's right. That's right, it was the
- book is for tape recorder-1 and we set it up for 2 because
2 was the one will be changed out.

CC Okay, we'll just press ahead as planned
then.

CDR Yeah. I was just saying that it's a good
thing we went up early because we discovered, you know, one
that we had different tape recorders to change out, that was
number one, and that we had the time to set it up tonight.

CC Okay, we have 6-1/2 minutes left and Rusty
wants to speak with you a bit.

SPT Okay, Hank the only thing on that TV is
I'd like at least to go ahead and start a little early if
I get a chance. I'll make sure to be done with it before
my ATM pass.

CC Roger.

MCC Hello, there.

CDR Go.

MCC It's EVA arm wave tonight. What I'd like to
do is give you kind of an introduction of what we're got
coming up in the next few days, and get your comments on it.
And what we'd like to do is let you know the sequence of
events. Tonight on the teleprinter we got coming up to you
three different messages. One of them is an inven if
the parts that we're recommending for the EVA. Second set
is assembly instructions, sort of a Heath kit kind of put-it-
together thing, and the third thing that's coming up is the
sort of EVA procedures - EV-1 do this, EV-2 do that. And that
will be coming up tonight while you're sleeping so you can
review that tomorrow whenever you get a chance. And tomorrow
evening we've got a Q&A session and some more detail inform-
ation scheduled on about a 1-hour pass or a 1-hour sec-
tion of time, two passes tomorrow evening. So, we'll be ready
for your questions on that kind of thing when you get a chance
to review the stuff that's coming up tonight. Okay, that's
Tuesday, then on Wednesday morning right now, we're tentatively
planning to give you about - something on the order of three
hours for getting all the stuff together and trying it out
there inside the workshop. You have a pretty good zero-g
simulator up there and we figured it'd probably be nice to
try it all out and distances are just about the inside of
the dome, as you can imagine, so that we figure a lot of this
stuff you can put together and play with. And if we got it
scheduled in the morning, we got a chance on TV you can hold
it up and say is this what you meant, or we think this is
better or whatever.

CDR Okay.

SL-11 MC-535/3

Time: 21:27 CDT, 12:02:27 GMT
6/4/73

MCC Okay, then Wednesday evening we want to try and perform the EVA on Thursday fairly early, so we got good coverage over the range and so in light of that we're trying to work it out so we can give you about an hour and a half or so Wednesday evening to do as much of the EVA prep that night so as to shorten the prep time on Thursday morning. Now, in -

CDR

Okay.

MCC

Okay now - if any time in between now and then you guys feel, for whatever reason, you think you need more time, just let us know and Friday's okay, too. There's no big (garble) on getting off on Thursday.

END OF TAPE

SL-11 NC-536/1

Time: 2:35 CDT 12:02:35 GMT

6/4/73

MCC - - for whatever reason. If you think you need more time, just let us know and Friday is okay too. There is no big (garble) on getting off on Thursday.

CDR

Okay.

SCHWEICKART Okay, here let me give you now, this is sort of as I say an arm-wave reason of the kind of thing we're looking at and you can review the stuff coming up tonight in light of this and then let's go into it in detail tomorrow. So here we go. What we've got basically Pete after working a lot of stuff in the water tank here with the gear you've got onboard there and looking at all the good photos that you took is we'll kind of break it into 3 parts. One is setting up an EV trail to get down there and do the job. The second part is cutting the strap or getting rid of the strap. And the third part is raising the beam. If PJ got out the SAS, the SWS and SAS map there, I can talk a little bit from that. Did you get a hold of that thing?

CDR

Yes we did.

SCHWEICKART Okay. Let's get our coordinatr system straight so that you guys can refer to it in the future and we'll know where you're talking about. The upper left hand corner, I figure starts at 1.0 and A0 so we can bring it down in tenths from there. So the upper right hand corner then is 10.0 and A0. Okay, what we plan on doing is getting EV2 up by the discone antenna with 5 poles, with the cable cutters on one end and the mushroom on the other end. And that means you've got to lengthen the rope and we've got the details coming up to you on that. The discone antennae is located at about 8.5 ar' B0. In other words 45 degrees between minus Y and minus Z up there right on the edge of the FAS. So you're reaching down and grabbing a hold of the debris with the cable cutters and you clamp onto some of the debris, preferably onto the strap you want to cut, and you clamp it that way and after you comes an EV trail. You don't go ahead and cut it you just clamp it. That then forms a trail down there. EV1 goes down the trail and hooks up a line, which we're calling the beam erection tether, to the bottom end of the number 1 vent module. We'll talk a little more of the details about that tomorrow, but you hook the line onto the bottom end of the vent module and that runs straight back up the beam and hooks on to the DA truss, there is a discone antennae A-frame crossmember up there that's right in line with it, and you take the tension up on that and you've got a tether all the way back to the A-frame. Okay, the preferred method of cutting that we can see now after working with all the tools, is

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you've got it hooked onto the strap to go ahead and pull with the cable cutters and cut through the strap. If for whatever reason you guys don't like that, we've got the pry bar out there with you, you can either pry it off or you can use the bone saw, either one. Okay, after you get the beam cut, the idea is for EV 1 to move back just aft of the beam hinge and stand up, you've got that tether now with all the slack out of it that runs right back along the beam, you stand up just after the beam hinge and you become a gin pole. You just stand up and lift up on the rope and you can get a devil of a lot of tension in it, you put a good hinge (garble) around the beam and you're up on top of it, and the beam comes, you break the bracket on the actuator damper and up comes the beam. That's a general thing. We'll hope to see you a little later. We've got 14 seconds to LOS.

CDR Okay. I hope you don't pull too hard or you're going to get swatted like a fly swatter.

SCHWEICKART No, we've done it a lot Pete, and it's kind of fun as a matter of fact. You'll enjoy watching it come up.

CDR Okay.

SCHWEICKART Adios.

CDR Adios.

SCHWEICKART See you in the morning.

CDR Rog.

PAO This is Skylab Control. Greenwich mean time 2 hours 39 minutes. The pass over Guam had astronaut Rusty Schweickart discussing with the Skylab crew the procedures to be carried out in performing, releasing the orbital workshop solar array. The procedures are being passed up tonight on the teleprinter while the crew is asleep and they are expected to review them tomorrow. Then tomorrow they will discuss it with the ground and have a - tomorrow evening have a question and answer session and then on Thursday morning they are scheduled to have three more hours of getting the material together, laying it out in the workshop, and using the television camera to transmit to the ground. Then again Wednesday evening they are scheduled to do 1-1/2 hours of EVA prep to give them more time for the EVA Thursday morning. The crew has been bid goodnight as they passed over the Guam tracking station. This is Skylab Control at 2 hours 41 minutes.

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PAO

This is Skylab Control, Greenwich mean time two hours 46 minutes. The 11th day of Skylab mission Monday, June 4th has been described as another successful day of science activities. The decision was made today by William C. Schneider, Director of Skylab Program Office, that an EVA will be performed - will be attempted on Thursday to repair the stuck solar panel on the orbital workshop. Earlier this evening Rusty Schweickart, backup Commander for Skylab 2 mission, discussed with the crew the procedures that will be followed to free this stuck solar panel. He told the crew that tonight the inventory parts for the EVA assembly instructions and EVA procedures would be passed up on the teleprinter. Tuesday the crew will spend some time discussing the procedures with the ground. And on Wednesday another three hours will be spent by the crew in assembling the various parts to be used in the EVA. Tuesday, June 5th, will be another day of scientific activity aboard the Skylab space station with EREP pass number five and MO-92 and M-171 experiments. MO-92 subject will be Commander Pete Conrad - this experiment is performed three times during the Skylab mission - pardon me - MO-92 is performed every three days on each crewman throughout the mission. M-171 is performed five times throughout the mission. The fifth EREP pass scheduled for tomorrow will be accomplished during a 318th revolution as the Skylab space station passes over the northeast corner of Nevada and crosses over Utah, Colorado, New Mexico, and Texas. Scientists are particularly interested in the Houston area test site, HATS, as it is referred to in the mission control center. There are 12 test sites within the HATS area, which covers nearly 20 counties in the Gulf Coast area. Tomorrow's EREP will also provide data for an Oshkosh, Wisconsin high school student, Joe B. Zmolek. Zmolek is one of 25 U.S. high school students whose experiment has been selected to fly aboard Skylab. His experiment ED-11 atmospheric heat absorption will use data gathered during EREP passes. More than 30 sites are scheduled to be covered during the 12-minute 2800 mile pass which starts in Nevada and ends in the Gulf of Mexico, just above the Yucatan Peninsula. At Greenwich mean time two hours and 48 minutes as the Skylab space station nears the end of its 309th revolution, the crew is bedding down for the night. Public Affairs console will close down. The next report will be at 6:00 a.m. central daylight time, Tuesday, June 5th. This is Skylab Control, Greenwich mean time two hours 49 minutes.

END OF TAPE